

ABSTRACT

A screen system for underground wells, and a method of fluid flow control and/or sand production control in a well. The screen system may include an inner screen and an outer screen having a plurality of slots. A mechanism, which may include a motor, is provided to vary the size of the said slots, and may achieve this by rotating one end of the inner screen relative to the other end. An external screen shroud may also be provided and the rotatable mechanism may be controlled by a controller coupled to electromechanical sensors mounted on one or more portions of the screen system, where the controller may employ a solids prediction model and a plugging tendency model to calculate a control action.